

IN THE CLAIMS:

Claims 1-6 (canceled).

7. (new) A motor comprising:

a stator assembly forming a cavity; and

a rotor assembly operatively mounted for rotation within the cavity, the rotor assembly having a rotatable joint assembly connecting members bonded to one another and of formed of dissimilar materials.

8. (new) The motor of claim 7, wherein the materials are bonded with an adhesive.

9. (new) The motor of claim 7, wherein the joint assembly has securing surfaces that are configured to essentially eliminate singularity points along a joint of the joint assembly.

10. (new) The motor of claim 7, wherein one of said members is exposed to a first temperature and another of said members is exposed to a second temperature different from the first temperature, the dissimilar materials and joint assembly providing thermal insulation between the first and second temperatures.

11. (new) The motor of claim 10, further comprising a refrigeration system providing a cooling agent to the rotor assembly to maintain rotor windings of the rotor assembly at a cryogenic temperature.

12. (new) The motor of claim 7, further comprising a vacuum jacket surrounding the rotor assembly to form a vacuum chamber therewithin that assists in thermally insulating the rotor windings.

13. (new) The motor of claim 7, wherein the rotor assembly has a second joint assembly of similar construction to the joint assembly, the joint assembly and second joint assembly being positioned on opposite ends of the rotor assembly.

14. (new) The motor of claim 7, wherein one of the materials is a thermal insulator and the other material is a metal.

15. (new) The motor of claim 7, wherein one of the members is formed of a composite material and is adhesively bonded to the other member.

16. (new) The motor of claim 7, wherein the joint assembly is a torque tube having a tubular member formed of first material adhesively bonded to first and second couplers formed of a second material.

17. (new) A superconducting motor comprising:

a stator assembly having stator windings forming a stator cavity; and

a rotor assembly having rotor windings, the rotor assembly operatively mounted to rotate within the stator cavity, the rotor assembly including a bonded joint assembly co-axially connecting members formed of dissimilar materials, one of said members exposed to a first temperature, another of said members exposed to a second temperature different from the first temperature which has been cooled.

18. (new) The superconducting motor of claim 17, wherein the joint assembly has securing surfaces that are configured to essentially eliminate singularity points along a joint of the joint assembly.

19. (new) The superconducting motor of claim 17, further comprising a refrigeration system providing a cooling agent to the rotor assembly to maintain the rotor windings at a cold temperature.

20. (new) The superconducting motor of claim 17, wherein the joint assembly is a torque tube having a tubular member formed of first material adhesively bonded to first and second couplers formed of a second material.

21. (new) The superconducting motor of claim 17, wherein the materials are bonded with an adhesive.
22. (new) The superconducting motor of claim 17, further comprising a vacuum jacket surrounding the rotor assembly to form a vacuum chamber therewithin that assists in thermally insulating the rotor windings.
23. (new) The superconducting motor of claim 21, wherein the rotor assembly has a second joint assembly of similar construction to the joint assembly, the joint assembly and second joint assembly being positioned on opposite ends of the rotor assembly.
24. (new) The superconducting motor of claim 17, wherein one of the materials is a thermal insulator and the other material is a metal.
25. (new) The superconducting motor of claim 24, wherein the thermal insulator is formed of a composite material and is adhesively bonded to the other member.
26. (new) A superconducting motor comprising: a stator forming a cavity, a rotor having windings mounted for rotation within the cavity, a vacuum jacket encapsulating the rotor and forming a vacuum region therewithin, the rotor having a shaft end, the shaft end including a bonded joint assembly providing thermal isolation for the windings.
27. (new) The superconducting motor of claim 26, wherein the joint assembly includes members formed of dissimilar material adhesively bonded together.
28. (new) The superconducting motor of claim 26, wherein the joint assembly has securing surfaces that are configured to essentially eliminate singularity points along a joint of the joint assembly.

29. (new) The superconducting motor of claim 27, wherein the rotor has a second joint assembly of similar construction to the joint assembly, the joint assembly and second joint assembly being positioned on opposite ends of the rotor.

30. (new) The superconducting motor of claim 27, wherein the joint assembly is a torque tube having a tubular member formed of first material adhesively bonded to first and second couplers formed of a second material.